Take Test: Quiz 3.2

Test Information

Description	
Instructions	
Multiple Attempts	This test allows multiple attempts.
Force Completion	This test can be saved and resumed later.

QUESTION 1

1 points Saved

True or false?
A state-space model can be described by four matrices: A, B, C, D.

- (●) True
- ( ) False

QUESTION 2

1 points Saved

Which of the following correctly describes the state matrix?

- ( ) A $n \times 1$ matrix that captures the effect of actuation on the state $x(t)$.
- (●) A $n \times n$ matrix that propogates state-based changes in the state $x(t)$.
- ( ) A $1 \times n$ matrix that captures the effect of sensed quantities.

- A $n \times 1$ vector $x(t)$

QUESTION 3

1 points Saved

True or false?

The state-space matrices A, B, C, D change as the system evolves over time.

- True
- False

QUESTION 4

1 points Saved

Question Completion Status:

1 2 3 4

- State-space models can only be 2-dimensional.
- State-space models capture input-output behavior, without any internal variables
- The size of the state-space model depends on the dimension of the state vector.
- Typically, the size of the state-space model is determined by the total order of the differential equations that capture the system dynamics.

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit